

Abstract

An apparatus for processing compounds in small volumes by electrophoresis, the apparatus comprising: (a) a cathode in a static cathode buffer zone or compartment; (b) an anode in a static anode buffer zone or compartment, the anode disposed relative to the cathode so as to be adapted to generate an electric field in an electric field area therebetween upon application of a voltage potential between the cathode and anode; (c) a first separation barrier disposed in the electric field area; (d) a second separation barrier disposed between a selected one of the cathode buffer zone and the anode buffer zone and the first barrier so as to define a first interstitial volume or chamber therebetween; wherein in use, electrophoretic buffer is disposed in the cathode buffer zone and the anode buffer zone, a sample constituent is provided to the first interstitial volume; wherein upon application of the voltage potential, a selected separation product is removed from the sample constituent through a selected one of the first and second separation barriers, and provided to a selected one of the cathode buffer and anode buffer zones; and wherein there is substantially no circulation of buffer or sample constituent in the buffer zones or the first interstitial volume.